

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Veli-Matti JUUTI <i>et al.</i>	Confirmation No.: 6626
Application No.: 09/914,953	Group Art Unit: 2617
Filed: October 24, 2001	Examiner: Daniel Jr, Willie J

For: CAMPING IN AN EXCLUSIVE CELL

Commissioner for Patents
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

This Appeal Brief is submitted in support of the Notice of Appeal dated October 1, 2009.

I. REAL PARTY IN INTEREST

The real party in interest is Nokia Corporation, a corporation organized under the laws of Finland and having a place of business at Keilalahdentie 4, FIN-02150 Espoo, Finland. The above referenced patent application is assigned to Nokia Corporation.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF THE CLAIMS

Claims 22-38 are pending in this appeal, in which claims 1-21 have earlier been canceled. No claim is allowed. This appeal is therefore taken from the final rejection of claims 22-38 on July 1, 2009.

IV. STATUS OF AMENDMENTS

The amendment to claims 22 and 38 filed April 10, 2009 has been entered.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed invention addresses problems associated with cell selection in a mobile telecommunications network. In particular, certain subscribers are prevented from camping in an exclusive access cell, while limited service to the exclusive access cell is granted to all mobile stations, including non-subscribers, for purposes of emergency calls.

Independent claim 22 recites:

22. A method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, the method comprising:

defining location areas each associated with a respective Location Area Code (LAC) and comprising a group of cells so that each cell of the mobile communications system belongs to a location area, wherein within each location area, the mobile station may move without updating its location (See, e.g., Specification ¶¶ [0010], [0023]; Fig. 1), localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a

cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes (See, e.g., Specification ¶¶ [0010], [0027], [0028]),

defining some of the location areas to be exclusive location areas each exclusive location area being identified with a respective LAC, an exclusive location area comprising exclusive cells for which an exclusive service condition is defined, so that a location area is either an exclusive location area or a non-exclusive location area (See, e.g., Specification ¶¶ [0010], [0023]-[0027]; Figs. 1 and 2);

broadcasting an LAC of a cell and, if the cell belongs to at least one localized service area, broadcasting an LSA-ID of each localized service area to which the cell belongs (See, e.g., Specification ¶¶ [0010], [0025]-[0028], [0042]-[0044]; Fig. 2; Fig. 5, 501);

receiving, via the cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update (See, e.g., Specification ¶¶ [0010], [0026]-[0031], [0042]-[0044]; Figs 2, 201, 202, 205, 206; Fig. 3, 301, 302, 305, 306; Fig. 5, 501);

checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 302; Fig. 5, 502, 503); and

if the new location area is an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 302-YES, 303; Fig. 5, 503-YES),

using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-207; Fig. 3, 303-307; Fig. 5, 503-508),

allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 306), and

preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 2, 205, 207; Fig. 3, 307),

if the new location area is not an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 202-NO; Fig. 3, NO, 308; Fig. 5, 503-NO):

checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 201-204; Fig. 3, 304; Fig. 5);

if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-208; Fig. 3, 305-307; Fig. 5, 504-506); and

if the subscriber has no localized service information, allowing the subscriber to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-208; Fig. 3, 305-307; Fig. 5, 506-508).

Independent claim 29 recites:

29. A method for deciding whether to trigger a location update by a mobile station used by a subscriber in a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a group of cells so that each cell belongs to a location area (See, e.g., Specification ¶¶ [0010], [0023]; Fig. 1), wherein within each location area, the mobile station may move without updating its location, the mobile communications system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas (See, e.g., Specification ¶¶ [0010], [0027], [0028]), and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the method comprising:

storing each LSA-ID of a subscriber using the mobile station if the subscriber has at least one

localized service area (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301, 303);

storing the LAC of a current cell serving the mobile station (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301, 303);

moving from the current cell to a new cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 303, 304);

receiving in a broadcast of the new cell the LAC of the new cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301);

receiving in the broadcast the LSA-ID of each localized service area the new cell belongs to if the new cell belongs to at least to one localized service area (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301);

receiving in the broadcast an indication of exclusive access (EA), indicating that a cell is an exclusive cell that belongs to an exclusive location area if the new cell is an exclusive cell for which an exclusive service condition is defined (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 302);

comparing in the mobile station the LAC of the new cell with the stored LAC, and if they are not the same, checking, whether the broadcast of the new cell contained the EA (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 304),

if the broadcast contained the EA

comparing the LSA-IDs of the new cell with the subscriber's LSA-IDs and if there is a match, sending a location update request (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 302-308), or

if there is no match or if the subscriber has no LSA-IDs, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state in the mobile station (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, 305-308, Fig. 5, 504-508),

if the broadcast contained no EA, sending a location update request to the system (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, 308, Fig. 5, 509).

Independent claim 30 recites:

30. A system comprising:

mobile stations (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1, MS); and

a network (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1, GSM) comprising:

exclusive cells and other cells via which a mobile station may be connected to the network,

location areas each identified by a Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area within which mobile stations may move without updating their location, wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1), and

localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to several localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when a mobile station is moving within the localized service area a location update may be triggered because the location area changes (See, e.g., Specification ¶¶ [0010], [0027], [0028]; Fig. 2),

the network being configured to broadcast in each cell the LAC of a cell and, if the cell belongs to at least one localized service area, the LSA-ID of each localized service area the cell belongs to (See, e.g., Specification ¶¶ [0023]-[0028]; Fig. 2, 201), wherein

each mobile station is configured, in response to receiving a LAC of a new location area in a cell broadcast, to send to the network a location update request which includes the LAC of the new location area and information about the subscriber using the mobile station (See, e.g., Specification ¶¶ [0010], [0027], [0028]; Fig. 2, 208), and

the network is configured to access information about exclusive location areas and, in response to receiving a location update request of a mobile station, to check whether the location area in the location update request and indicated by LAC is defined as an

exclusive location area and if it is, to use the exclusive service condition of the cell to determine whether or not the subscriber is allowed to camp in the cell, and to reject the location update if the subscriber is not allowed to camp in the cell; and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one localized service area identification (LSA-ID) with information about the subscriber's access rights

outside the subscriber's LSA-IDs (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 201-204; Fig. 3, 304; Fig. 5), if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, 305-308, Fig. 5, 504-508).

Independent claim 34 recites:

34. A network element for a mobile communications system taking part in location update procedures between the system and a mobile station, said system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area (See, e.g., Specification ¶¶ [0010], [0023]; Fig. 1), wherein within each location area the mobile station may move without updating its location, which LAC the system is configured to broadcast in a cell broadcast, wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined, the system further comprising localized service areas each associated with a respective Localized Service

Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas (See, e.g., Specification ¶¶ [0010], [0027], [0028]), and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the system being further configured to broadcast in the cell broadcast an LSA-ID of each localized service area the cell belongs to, if the cell belongs to at least one localized service area (See, e.g., Specification ¶¶ [0010], [0027], [0028]; Fig. 2),

wherein the network element comprises a processor (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1, processors in MSC, BSC) configured:

to store or to have access to information about the at least one location area defined to be an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301, 303),

to have access to subscribers' localized service area information and localized service information on cells (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 301-304), and,

in response to receiving from a mobile station a location update request to a cell belonging to a location area identified by a LAC in the request, to check whether the location area indicated by the LAC is defined as an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 302) and if it is, to use the exclusive service condition of the cell to check whether the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-208; Fig. 3, 305-307; Fig. 5, 504-506), and to reject the location update if the subscriber is not allowed to camp

in the cell and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one LSA-ID with information about the subscriber's access rights outside the LSA-ID (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 201-204; Fig. 3, 304; Fig. 5),

if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, 305-308, Fig. 5, 504-508).

Independent claim 37 recites:

37. A mobile station for a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area, wherein within each location area the mobile station may move without updating its location (See, e.g., Specification ¶¶ [0010], [0023]; Fig. 1), the system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous such that a cell may belong to one or more localized service areas or to none of the localized service areas (See, e.g., Specification ¶¶ [0010], [0027], [0028]), and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes (See, e.g., Specification ¶¶ [0010], [0027], [0028]; Fig. 2), the mobile station comprising:

a processor and a memory operatively connected thereto, wherein the memory contains an LSA-ID associated with each localized service area for a subscriber using the mobile station (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1, processors in MSC, BSC; memory-database described at paragraph [0021]), wherein the processor is configured:

to support localized service area definitions (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1),

to access the LSA-ID in the memory (See, e.g., Specification ¶¶ [0020]-[0025]; Fig. 1),

to receive broadcast information about a location area of a cell, the information including the LAC of the cell, LSA-IDs of each localized service area the cell belongs to if the cell belongs to at least one localized service area, and an indication of exclusive access (EA) if the cell belongs to a location area defined to be an exclusive location area comprising exclusive cells for which an exclusive service condition is defined (See, e.g., Specification ¶¶ [0010], [0025]-[0028], [0042]-[0044]; Fig. 2; Fig. 5, 501), and,

in response to receiving in the broadcast a LAC of a new location area, the LSA-IDs of the cell and the EA, to compare the received LSA-IDs with the subscriber's LSA-IDs (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 302-308), and

if there is a match between the received LSA-IDs and the subscriber's LSA-IDs, to send a location update request to the system (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 3, 305-YES, 306), or

if there is no match or if the subscriber has no LSA-IDs, to try to find a suitable cell in which to camp and if a suitable cell is not found, and to enter a limited service state (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, Fig. 5, 508); and,

in response to receiving in the broadcast a LAC of a new location area and LSA-IDs of the cell but no EA, to send a location update request to the system (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 3, 306, Fig. 5, 509).

Independent claim 38 recites:

38. A method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, the method comprising:

defining a group of cells so that each cell of the mobile communications system belongs to one location area of a plurality of location areas each location area being identified with a respective LAC, wherein within each location area, the mobile station may move without updating its location (See, e.g., Specification ¶¶ [0010], [0023]; Fig. 1);

defining a portion of the plurality of location areas to be exclusive location areas, each of said portion being identified with a respective Location Area Code (LAC), each exclusive location area comprising exclusive cells for which an exclusive service condition is defined, wherein, within each exclusive location area, the mobile station may move without updating its location (See, e.g., Specification ¶¶ [0010], [0023]-[0027]; Figs. 1 and 2);

broadcasting an LAC of a particular cell and, if the particular cell provides special services only to some subscribers broadcasting an localized service area identification (LSA-ID) of each service cell provides (See, e.g., Specification ¶¶ [0010], [0025]-[0028], [0042]-[0044]; Fig. 2; Fig. 5, 501);

receiving, via the particular cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and

includes a LAC for the new location area to which the subscriber would like to update (See, e.g., Specification ¶¶ [0010], [0026]-[0031], [0042]-[0044]; Figs 2, 201, 202, 205, 206; Fig. 3, 301, 302, 305, 306; Fig. 5, 501);

checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 302; Fig. 5, 502, 503; and

if the new location area is an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 302-YES, 303; Fig. 5, 503-YES):

using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-207; Fig 3, 303-307; Fig. 5, 503-508),

allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205, 206; Fig. 3, 306), and

preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031]; Fig. 2, 205, 207; Fig. 3, 307); or

if the new location area is not an exclusive location area (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 202-NO; Fig. 3, NO, 308; Fig. 5, 503-NO):

checking whether or not the subscriber has subscribed a specific special service with restricted access rights (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 201-204; Fig. 3, 304; Fig. 5); and

if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-208; Fig. 3, 305-307; Fig. 5, 504-506); or

if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell (See, e.g., Specification ¶¶ [0010], [0028]-[0031], [0042]-[0044]; Fig. 2, 205-208; Fig. 3, 305-307; Fig. 5, 506-508),

wherein cells providing the same special service are grouped to form a localized service area, which is other than the location areas and the exclusive location areas (See, e.g., Specification ¶ [0024])

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claim 38 was rejected for relying on an inadequate written description under the first paragraph of 35 U.S.C § 112.

Claims 22-27 and 29-38 were rejected for obviousness under 35 U.S.C. § 103(a) based on *Salmela et al.* (WO 98/30056) in view of *Nordstrand* (US 6,334,052) and *Seppanen et al.* (US 5,903,832).

Claim 28 was rejected for obviousness under 35 U.S.C. § 103(a) based on *Salmela et al.* (WO 98/30056) in view of *Nordstrand* (US 6,334,052), *Seppanen et al.* (US 5,903,832), and *Rune* (US 6,212,390).

Appellants note the Examiner's objection to claim 38 on page 2 of the Final Office Action. The insertion of "location area code" before the first recitation of "LAC" will be made

by Appellants after a favorable decision by the Honorable Board, and prior to allowance of the application. The lack of said recitation does not affect the understanding of the claimed subject matter and it is believed the Honorable Board will be able to make its decision based on claim 38 as it presently exists.

With regard to the Examiner's objection to claim 38 because of a recitation of "...it location..." the objection is, frankly, not understood, as the claim properly recites "...its location..." and it is clear that "its" refers to the recited "mobile station."

It is noted that the objections to claim 38 constitute petitionable, and not appealable, matter. Thus, the Honorable Board will not decide this issue. Appellants merely mention it for completeness.

VII. ARGUMENT

A. **CLAIM 38 DOES NOT RELY ON AN INADEQUATE WRITTEN DESCRIPTION AS THE FEATURE OF "OTHER THAN THE LOCATION AREAS AND THE EXCLUSIVE LOCATION AREAS" HAS ADEQUATE SUPPORT IN THE ORIGINAL DISCLOSURE.**

The inquiry to be made regarding a rejection under the written description clause of 35 U.S.C. 112, first paragraph, pertains to whether the disclosure (specification, drawings, claims) as originally filed reasonably conveys to the journeyman practitioner in the art that the inventor had possession at that time of that which he now claims. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90, 98 (CCPA 1976). Literal support of the disclosure for the terms of the claims challenged by the examiner is not necessary in order to show such possession. *In re Wright*, 866 F.2d 422, 425, 9 USPQ2d 1649, 1651 (Fed. Cir. 1989); *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089,

1096 (Fed. Cir. 1983); *In re Herschler*, 591 F.2d 693, 700-701, 200 USPQ 711, 717 (CCPA 1979); *In re Lukach*, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971).

A review of paragraph [0024] of the instant specification, for example, reveals that “the exclusive access cells and the non-exclusive access cells of one location service area should have different location areas” and that it “is also possible that the exclusive access cells of one local service area belong to different exclusive location areas. So cells with different location area codes LAC may have the same location service area identities LSA ID(s). The exclusive location areas may comprise cells from a plurality of localized service areas.” Thus, the exclusive and non-exclusive access cells of one location service area have different location areas within the one location service area, **but the exclusive access cells of that one location service area may belong to different exclusive location areas.** Therefore, these exclusive (special service) cells are grouped to form a localized service area, “which is other than the location areas and the exclusive location areas.” It is noted that a “localized service area” refers to the service area to which the exclusive access cells belong and that this “localized service area” is different from the “one location service area” and is also different from the “exclusive location areas” within the one location area. Thus, the disclosure as originally filed reasonably conveys to the journeyman practitioner in the art that the inventors had possession at that time of that which they now claim.

Since there is clear support, at paragraph [0024] of the specification, for example, for the claimed feature of “other than the location areas and the exclusive location areas,” in claim 38, the Honorable Board’s reversal of the Examiner’s rejection of claim 38 under the first paragraph of 35 U.S.C. § 112 is respectfully solicited.

B. CLAIMS 22-27 AND 29-38 ARE NOT RENDERED OBVIOUS BY *SALMELA ET AL.*, *NORDSTRAND*, AND *SEPPANEN ET AL.* BECAUSE NONE OF THE APPLIED REFERENCES TEACHES OR SUGGESTS THE CLAIMED FEATURE OF THE EXCLUSIVE ACCESS CELLS AND THE NON-EXCLUSIVE ACCESS CELLS OF ONE LOCATION SERVICE AREA BEING IN DIFFERENT LOCATION AREAS.

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention under any statutory provision always rests upon the Examiner. *In re Mayne*, 104 F.3d 1339, 41 USPQ2d 1451 (Fed. Cir. 1997); *In re Deuel*, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995); *In re Bell*, 991 F.2d 781, 26 USPQ2d 1529 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner is required to provide a factual basis to support the obviousness conclusion. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 357 F.2d 385, 148 USPQ 721 (CCPA 1966); *In re Freed*, 425 F.2d 785, 165 USPQ 570 (CCPA 1970).

The Examiner has inserted the same misunderstanding apparently applied in the rejection under 35 U.S.C. § 112 into the obviousness rejection. As explained *supra*, the Examiner's rationale is based on the flawed premise that a "location area" is the same as, and interchangeable with, a "localized service area."

Thus, when applying *Salmela et al.* to the claim feature "so that a location area is either an exclusive location area or a non-exclusive location area," the Examiner uses LSA1 or cell 1 as an example of an exclusive location area. However, *Salmela et al.* merely teaches that local service area LSA1 comprises cells C1-C3. The reference provides no other explanation regarding the properties of these cells. Accordingly, there is **no basis for the Examiner's conclusion that the localized service areas in *Salmela et al.* constitute a disclosure or a suggestion that a location area is either an exclusive one or a non-exclusive one.**

Nordstrand teaches controlling access to a cell by subscription data, i.e., special service areas are subscriber-specific. Therefore, the disclosed service areas correspond to LSAs as defined in *Salmela et al.* Since *Salmela et al.* teaches implementation of LSAs with handover and *Nordstrand* teaches implementing the LSA in idle mode, the combination of references may suggest an implementation of LSAs regardless of the state of the mobile station and may also suggest checking the state of the mobile station during location update and then continuing on as in either of the references. However, this **combination still fails to teach or even suggest checking whether the new location area is an exclusive one or a non-exclusive one**, as recited by the instant claims. In accordance with the instant claims, there must be a determination of whether the new location area is an exclusive one or a non-exclusive one (“checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area”) to provide for “using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell, allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell, and preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell,” if the new location area is an exclusive location area, and to provide for “checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs” if the new location area is not an exclusive location area, as claimed. It is the Examiner's position that *Salmela et al.* teaches checking whether a LAI is defined as LSAs, i.e., whether a location area is defined as a localized service area. However, checking whether LAI is equivalent to LSA is never performed by *Salmela et al.* If *Salmela et al.* was to make such a comparison, the outcome of such a

comparison could never result in an LAI ever being an LSA, i.e., in *Salmela et al.*, a location area is **never an exclusive location area**. Accordingly, the situation in the claimed feature of “if the new location area is an exclusive location area,” along with related features, could never occur in *Salmela et al.*

Salmela et al. teaches the basic concept of “location areas,” as claimed (e.g., see page 2, lines 2-4), and that a location area is identified by LAI (which corresponds to “LAC” as recited in the instant claims), but does not teach or suggest that a location area may be an **exclusive** location area, as claimed.

Salmela et al. also teaches the concept of “localized service areas,” identified by LSAs (and corresponding to the instant claimed “localized service areas”), but the reference defines “localized service areas” at page 5, lines 14-18, as “a special service area is defined for a mobile subscriber by drawing up a list of certain network cells, i.e. special cells, for the subscriber. The list can be utilized in a mobile station or in a fixed network. In the present application such a special service area is referred to as LSA (Localised Service Area).” However, since the location area and localized service area in *Salmela et al.* have different definitions, as in the instant claims, they cannot be read as one and the same concept, as the Examiner has interpreted them. Yet, at page 5 of the Final Office Action, the Examiner appears to equate the LAI and LSA in *Salmela et al.* as synonyms, which, for the reasons, *supra*, they are not. But even assuming, *arguendo*, that the LAI and LSA of *Salmela et al.* are synonymous, which, of course, they are not, the localized service areas (LSAs) of *Salmela et al.* could not then correspond to the claimed “localized service areas.”

Nordstrand is silent as to a location update procedure and location areas. It is true that *Seppanen et al.* suggests a mobile terminal searching for a suitable network and if a suitable

network is not found, the mobile terminal enters the limited service state. However, **a suitable network is different than a suitable cell**. Therefore, *Seppanen et al.* fails to fill in the gaps of the other references since it fails to teach or suggest that when a suitable **cell** is not found, the mobile terminal enters the limited service state.

Moreover, starting at page 18 of the Final Office Action, the Examiner takes the position that microcells grouped for access in *Nordstrand* correspond to localized service areas and that macrocells correspond to both non-exclusive and exclusive location areas. However, the person of ordinary skill in the art would clearly understand that a macrocell, comprising microcells, does not teach or suggest a “location area,” particularly not an exclusive location area and a non-exclusive location area, as claimed.

At best, the combination of *Salmela et al.*, *Nordstrand*, and *Seppanen et al.* would result in a system wherein, if a suitable network is found, the teachings of *Salmela et al.* and *Nordstrand* are implemented and, if no suitable network is found, a limited service state is entered, but this scenario does not correspond to the instant claimed subject matter.

At page 5 of the Final Office Action, the Examiner contorts the instant claim language by interpreting the claim feature “defining some of the location areas to be exclusive location areas” to recite “defining some of the location areas to be localized service areas,” explaining that an exclusive location area can be read as a localized service area. For the reasons *supra*, presented in the argument regarding the rejection under the first paragraph of 35 U.S.C. § 112, they cannot be so read and the Examiner’s interpretation of an exclusive location area to be a localized service area is unreasonable and, simply, wrong. Appellants further note that the instant specification actually employs the terms “location service area” in paragraphs [0024] and [0032]

and “local service area” in paragraphs [0024], [0040], and [0041] but these are synonymous with “localized service area” employed in the claims.

Location areas are the same for all subscribers; and they are network-specific features targeted to trigger a location update so that the subscriber can be found when needed. Localized service areas, on the other hand, are subscriber-specific and targeted to provide different services to different subscribers. **The term “location area” does not correspond to, and is much different from, the term “localized service area.”** The Examiner’s assumption, upon which the rejection of the claims under 35 U.S.C. § 103(a) is based, that these terms are equivalent is flawed. While “location areas” are network-specific features for the purpose of triggering a location update so that a subscriber can be found when needed, and are the same for all subscribers, “localized service areas” are subscriber-specific and targeted to provide different services to different subscribers.

Accordingly, for at least the reasons, *supra*, the Examiner has failed to establish a *prima facie* case of obviousness regarding the subject matter of claims 22-27 and 29-38. Therefore, the rejection of claims 22-27 and 29-38 under 35 U.S.C. § 103(a) is neither legally nor factually viable and reversal of this rejection by the Honorable Board is respectfully solicited.

C. CLAIM 28 IS NOT RENDERED OBVIOUS BY *SALMELA ET AL.*, *NORDSTRAND*, *SEPPANEN ET AL.*, AND *RUNE* BECAUSE *RUNE* DOES NOT CURE THE DEFICIENCIES OF THE OTHER APPLIED REFERENCES.

Rune, applied for the supposed teaching of rejecting the location update with the cause "roaming not allowed in this location area," does not cure the deficiencies of *Salmela et al.*, *Nordstrand*, and *Seppanen et al.*, argued *supra*.

Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness regarding the subject matter of claim 28. Therefore, the rejection of claim 28 under 35 U.S.C. §103(a) is neither legally nor factually viable and reversal of this rejection by the Honorable Board is respectfully solicited.

VIII. CONCLUSION AND PRAYER FOR RELIEF

For the foregoing reasons, Appellants request the Honorable Board to reverse each of the Examiner's rejections.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 504213 and please credit any excess fees to such deposit account.

Respectfully Submitted,

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April 28, 2010
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IX. CLAIMS APPENDIX

Claims 1-21. (Canceled)

22. A method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, the method comprising:

defining location areas each associated with a respective Location Area Code (LAC) and comprising a group of cells so that each cell of the mobile communications system belongs to a location area, wherein within each location area, the mobile station may move without updating its location,

localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes,

defining some of the location areas to be exclusive location areas each exclusive location area being identified with a respective LAC, an exclusive location area comprising exclusive cells for which an exclusive service condition is defined, so that a location area is either an exclusive location area or a non-exclusive location area;

broadcasting an LAC of a cell and, if the cell belongs to at least one localized service area,

broadcasting an LSA-ID of each localized service area to which the cell belongs;

receiving, via the cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update;

checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area; and

if the new location area is an exclusive location area,

using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell,

allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell, and

preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell,

if the new location area is not an exclusive location area:

checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs;

if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell; and

if the subscriber has no localized service information, allowing the subscriber to camp in the cell.

23. A method according to claim 22, the method further comprising maintaining information about location areas that are defined as exclusive location areas in a network element configured to reject or accept location updates.

24. A method according to claim 23, the method further comprising:

maintaining cell information indicating whether a cell is an exclusive cell; and

using said cell information to define whether the new location area is an exclusive location area.

25. A method according to claim 22, the method further comprising:

receiving an indication indicating whether the cell is an exclusive cell during location update;
and

deciding on the basis of the indication whether the location area of the cell is an exclusive location area.

26. A method according to claim 22, wherein

the exclusive cells are exclusive access cells belonging to one or more localized service areas;
and

if the new location area is an exclusive location area, whether or not the subscriber is allowed to camp in the cell is determined by checking whether or not the subscriber has the localized service area information and if the subscriber has the localized service area information comparing the LSA-IDs of the subscriber with the LSA-IDs of the cell and allowing the subscriber to camp in the cell only if there is a match, and if the subscriber does not have the localized service information the subscriber is not allowed to camp in the cell.

27. A method according to claim 22, further comprising:

defining location areas so that when an exclusive access cell belongs to a location area, the other cells in that location area are also exclusive cells;

maintaining information about location areas comprising exclusive cells; and

using that information to decide whether the location area of the cell is an exclusive location area.

28. A method according to claim 22, further comprising rejecting the location update with the cause "roaming not allowed in this location area".

29. A method for deciding whether to trigger a location update by a mobile station used by a subscriber in a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a group of cells so that each cell belongs to a location area, wherein within each location area, the mobile station may move without updating its location, the mobile communications system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the method comprising:

storing each LSA-ID of a subscriber using the mobile station if the subscriber has at least one localized service area;

storing the LAC of a current cell serving the mobile station;

moving from the current cell to a new cell;

receiving in a broadcast of the new cell the LAC of the new cell;

receiving in the broadcast the LSA-ID of each localized service area the new cell belongs to if the new cell belongs to at least to one localized service area;

receiving in the broadcast an indication of exclusive access (EA), indicating that a cell is an exclusive cell that belongs to an exclusive location area if the new cell is an exclusive cell for which an exclusive service condition is defined;

comparing in the mobile station the LAC of the new cell with the stored LAC, and if they are not the same, checking, whether the broadcast of the new cell contained the EA,

if the broadcast contained the EA

comparing the LSA-IDs of the new cell with the subscriber's LSA-IDs and if there is a match, sending a location update request, or

if there is no match or if the subscriber has no LSA-IDs, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state in the mobile station,

if the broadcast contained no EA, sending a location update request to the system.

30. A system comprising:

mobile stations; and

a network comprising:

exclusive cells and other cells via which a mobile station may be connected to the network,

location areas each identified by a Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area within which mobile stations may move without updating their location, wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined, and

localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a

cell may belong to several localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when a mobile station is moving within the localized service area a location update may be triggered because the location area changes,

the network being configured to broadcast in each cell the LAC of a cell and, if the cell belongs to at least one localized service area, the LSA-ID of each localized service area the cell belongs to, wherein

each mobile station is configured, in response to receiving a LAC of a new location area in a cell broadcast, to send to the network a location update request which includes the LAC of the new location area and information about the subscriber using the mobile station, and

the network is configured to access information about exclusive location areas and, in response to receiving a location update request of a mobile station, to check whether the location area in the location update request and indicated by LAC is defined as an exclusive location area and if it is, to use the exclusive service condition of the cell to determine whether or not the subscriber is allowed to camp in the cell, and to reject the location update if the subscriber is not allowed to camp in the cell; and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one localized service area identification (LSA-ID) with information about the subscriber's access rights

outside the subscriber's LSA-IDs, if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell.

31. A system according to claim 30, wherein
the network is configured to further broadcast an indication (EA) that the cell is an exclusive cell when the cell belongs to an exclusive location area, and
the mobile station is configured, in response to receiving both a new LAC and said indication EA, to determine whether the mobile station is allowed to camp in the cell, and if it is allowed, to send a location update request to the network, or if it is not allowed, to try to find a suitable cell in which to camp and if a suitable cell is not found, to enter a limited service state.
32. A system according to claim 30, wherein the exclusive cells are exclusive access cells belonging to one or more localized service areas; and
if the new location area is an exclusive location area, the network is further configured to receive information on the localized service area of the cell and to determine whether the subscriber is allowed to camp in the cell by checking whether or not the subscriber has the localized service area information and if the subscriber has the localized service area information,
the network is further configured to compare the LSA-IDs of the cell with the subscriber's LSA-ID and to allow the subscriber to camp in the cell only if there is a match, and if the subscriber does not have the localized service information, the network is further configured to determine that the subscriber is not allowed to camp in the cell.
33. A system according to claim 30, wherein the network is configured to broadcast further an indication EA that the cell is an exclusive access cell when the cell is an exclusive access cell, and

the mobile station is configured to store LSA-IDs of the subscriber, if the subscriber has at least one localized service areas, and, in response to receiving a combination of a LAC of the new location area, one or more LSA-IDs and said indication EA, to compare the received LSA-IDs with the subscriber's LSA-IDs stored to the mobile station, and if there is a match, to send a location update request to the network, or if there is no match, to try to find a suitable cell in which to camp and if a suitable cell is not found, to enter a limited service state.

34. A network element for a mobile communications system taking part in location update procedures between the system and a mobile station, said system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area, wherein within each location area the mobile station may move without updating its location, which LAC the system is configured to broadcast in a cell broadcast, wherein at least one of the location areas identified by the LAC is defined to be an exclusive location area comprising at least one exclusive access cell for which an exclusive service condition is defined, the system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the system being further configured to broadcast in the cell broadcast an LSA-ID of each localized service area the cell belongs to, if the cell belongs to at least one localized service area,

wherein the network element comprises a processor configured:

to store or to have access to information about the at least one location area defined to be an exclusive location area,

to have access to subscribers' localized service area information and localized service information on cells, and,

in response to receiving from a mobile station a location update request to a cell belonging to a location area identified by a LAC in the request, to check whether the location area indicated by the LAC is defined as an exclusive location area and if it is, to use the exclusive service condition of the cell to check whether the subscriber is allowed to camp in the cell, and to reject the location update if the subscriber is not allowed to camp in the cell and if the location area is not an exclusive location area to check whether or not the subscriber has localized service information comprising at least one LSA-ID with information about the subscriber's access rights outside the LSA-ID,

if the subscriber has the localized service information, to use it to determine whether or not the subscriber is allowed to camp in the cell, and if the subscriber has no localized service information, to allow the subscriber to camp in the cell.

35. A network element according to claim 34, wherein the exclusive cells are exclusive access cells belonging to one or more localized service areas; and

if the new location area is an exclusive location area, the processor is further configured:

to receive information on the localized service area of the cell and to determine whether the subscriber is allowed to camp in the cell by checking whether or not the subscriber has the localized service area information and if the subscriber has the localized service area information,

to compare the LSA-IDs of the cell with the subscriber's LSA-IDs and to allow the subscriber to camp in the cell only if there is a match, and
if the subscriber does not have the localized service information, to determine that the subscriber is not allowed to camp in the cell.

36. A network element according to claim 34, wherein the information about location areas defined as exclusive location areas comprises location areas having at least one cell which is in the area of the network element.

37. A mobile station for a mobile communications system comprising cells, and location areas each associated with a respective Location Area Code (LAC) and defining a groups of cells so that each cell belongs to a location area, wherein within each location area the mobile station may move without updating its location, the system further comprising localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous such that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes, the mobile station comprising:

a processor and a memory operatively connected thereto, wherein the memory contains an LSA-ID associated with each localized service area for a subscriber using the mobile station, wherein the processor is configured:
to support localized service area definitions,
to access the LSA-ID in the memory,

to receive broadcast information about a location area of a cell, the information including the LAC of the cell, LSA-IDs of each localized service area the cell belongs to if the cell belongs to at least one localized service area, and an indication of exclusive access (EA) if the cell belongs to a location area defined to be an exclusive location area comprising exclusive cells for which an exclusive service condition is defined, and,

in response to receiving in the broadcast a LAC of a new location area, the LSA-IDs of the cell and the EA, to compare the received LSA-IDs with the subscriber's LSA-IDs, and

if there is a match between the received LSA-IDs and the subscriber's LSA-IDs, to send a location update request to the system, or

if there is no match or if the subscriber has no LSA-IDs, to try to find a suitable cell in which to camp and if a suitable cell is not found, and to enter a limited service state; and,

in response to receiving in the broadcast a LAC of a new location area and LSA-IDs of the cell but no EA, to send a location update request to the system.

38. A method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells, the method comprising:

defining a group of cells so that each cell of the mobile communications system belongs to one location area of a plurality of location areas each location area being identified with a respective LAC, wherein within each location area, the mobile station may move without updating its location;

defining a portion of the plurality of location areas to be exclusive location areas, each of said portion being identified with a respective Location Area Code (LAC), each exclusive location area comprising exclusive cells for which an exclusive service condition is

defined, wherein, within each exclusive location area, the mobile station may move without updating its location;

broadcasting an LAC of a particular cell and, if the particular cell provides special services only to some subscribers broadcasting an localized service area identification (LSA-ID) of each service cell provides;

receiving, via the particular cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update;

checking during the location update procedure whether the new location area indicated by the LAC is defined as an exclusive location area; and

if the new location area is an exclusive location area:

- using the exclusive service condition of the cell in determining whether or not the subscriber is allowed to camp in the cell,
- allowing the mobile station to camp in the cell by accepting the location update if the subscriber is allowed to camp in the cell, and
- preventing the mobile station from camping in the cell by rejecting the location update if the subscriber is not allowed to camp in the cell; or

if the new location area is not an exclusive location area:

- checking whether or not the subscriber has subscribed a specific special service with restricted access rights; and
- if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell; or

if the subscriber has not subscribed the specific special service, allowing the subscriber to
camp in the cell,
wherein cells providing the same special service are grouped to form a localized service
area, which is other than the location areas and the exclusive location areas.

X. EVIDENCE APPENDIX

Appellants are unaware of any evidence that is required to be submitted in the present Evidence Appendix.

XI. RELATED PROCEEDINGS APPENDIX

Appellants are unaware of any related proceedings that are required to be submitted in the present Related Proceedings Appendix.